

Sub
A1

0303.ST25

SEQUENCE LISTING

<110> Gurney, Mark E.
Abraham, Irene

<120> Transgenic Mouse Model Of Human Neurodegenerative Disease

<130> PHRM0303

<150> 60/177,319

<151> 2000-01-21

<160> 15

<170> PatentIn version 3.0

<210> 1

<211> 1152

<212> DNA

<213> Homo sapiens

<400> 1

atggctgagc cccgccagga gttcgaagtg atggaagatc acgctgggac gtacgggttg 60
ggggacagga aagatcaggg gggctacacc atgcaccaag accaagaggg tgacacggac 120
gctggcctga aagctgaaga agcaggcatt ggagacaccc ccagcctgga agacgaagct 180
gctggtcacg tgacccaagc tcgcatggtc agtaaaagca aagacgggac tggaagcgat 240
gacaaaaaag ccaagggggc tgatggtaaa acgaagatcg ccacaccgcg gggagcagcc 300
cctccaggcc agaagggcca ggccaacgcc accaggattc cagcaaaaac cccgcccgct 360
ccaaagacac caccagctc tggatgaacct ccaaaatcag gggatcgag cggtacagc 420
agccccggct cccaggcac tcccggcagc cgctcccgca ccccgctcct tccaaccca 480
cccacccggg agccaagaa ggtggcagtg gtccgtactc caccgaagtc gccgtcttcc 540
gccaaagacc gcctgcagac agccccgtg cccatgccag acctgaagaa tgtcaagtcc 600
aagatcgggt cactgagaa cctgaagcac cagccgggag gcgggaaggt gcagataatt 660
aataagaagc tggatcttag caacgtccag tccaagtgtg gctcaaagga taatatcaaa 720
cacgtcccg gaggcgagc tgtgcaaata gtctacaaac cagttgacct gagcaaggtg 780
acctccaagt gtggctcatt aggcaacatc catcataaac caggaggtgg ccagggtgaa 840
gtaaaaatctg agaagcttga cttcaaggac agagtccagt cgaagattgg gtccctggac 900
aatatcacc acgtccctgg cggaggaaat aaaaagattg aaaccacaa gctgaccttc 960
cgcgagaacg ccaaagccaa gacagaccac gggcgaggaga tcgtgtacaa gtcgccagtg 1020
gtgtctgggg acacgtctcc acggcatctc agcaatgtct cctccaccgg cagcatcgac 1080
atggtagact cgtcccagct cgtcacgcta gctgacgagg tgtctgcctc cctggccaag 1140
cagggtttgt ga 1152

<210> 2

<211> 9990

<212> DNA

<213> Mus musculus

<400> 2

ggcggccgcg acggatccaa aggcagcaaa aaggcagaga gggtgatact gggcctggct 60
 taagcatttg aaacttcaaa gtcaccccc aattacacac ttcttccaa aagtcacac 120
 ctcttaatta gtgcactct ctgtgggcct acggagagta ttttcattct aactaccaca 180
 gttgctgagg aatttaatta aaactacaac cttatcccaa cctagatctt tcagcctttc 240
 tgtactacca gagaggggtc atacagcatt gttgtgactc ccattataac ttaaaggga 300
 gctcacacaa agtcagagc cctccatacc ctgcaaatga agaagtacgt tctcaaattc 360
 cttggagcag ggccctactt tggcggcaca aactttaatt tctagacgga acggcatctc 420
 tacagaaaga aaagccatgg tatctgcatg ataagtctga aaaggacctg ggcaaattctg 480
 cagctgacaa ttccagccat tgctgccact gcgagaaaac cctgctgatg gcagcattgt 540
 cagcatcatc tcctccagga acaccggcca tcgagccacg aggacaattg ctgctgctgg 600
 agtcaattca tctgccagcc acatcatact ctgggaccgt cactaaccag atccaagcag 660
 ccttgaggaa gcatgtcttc tgggtgtgac tgatcccaag ggctgacaac aaggctctca 720
 cagaggcatc ttatgtcaac ctatctacca tgcacggtat aagacacatt ctctctgtg 780
 ctgtgtggac actgccatca cacgcaacag aaaggaaact cactcactgt gtctgatgtg 840
 gtggtgcttg ttaggggagt tctgggcatg tatggcacca tcgcccatga ggactcctgt 900
 ggggtcatgc ccactctact cctctagaga ccatgaagag atggagaggg aagagcaagc 960
 acagatgaca ggctagaact aaagaggagt gtcaggtgag cggacctgaa ctcacggctg 1020
 ctcagcctga agtgggtgtg ccatctgcat ctggtatctg gtctgaagggt gcgtggatac 1080
 cctctgtgcc cgtccagaag tttcctactg aagacagaaa tgctgtcca gtcattggaag 1140
 aatgattggc agttccact tctcagacca ctgaatgggt cagaacaact actgggtgac 1200
 cctaaggat tcttcagcag atatgtgtga aaaatggaaa gaagatgggt agaaataaac 1260
 ggttttagag gaaaaaact ctcacaaaga tattataaaa agaaaagagc tttattattg 1320
 agcaagcatt caaccagaat gcacaccaca ggcagtctgc taaggagtg tgcagacagg 1380
 aggagtgtcg ccctttatgt gagccagtag ataaggatgc tgtgcgtgtt tttagtaact 1440
 ggtcttcagc ttgacagcac cttttatcac atggtttaac cttaaattcat ctggcgaatg 1500
 aggctgtcac gtacttctg attagcttta tctgaaatga gacaagcttc acatgttcac 1560
 ggcaggaggt aatcctgctg cttagagaac aggttccatc caagccaggc tccttctccc 1620
 accaacacgg gtggttgaag agctatctct ccctgggtgtg tgtgtttcag agatggctcc 1680
 caggtttttg gtttggtttg aattgggttt tggttttctt actctagccc agactagctt 1740
 ggaattctct ggaaagctgc aacggggagc tcaggttcag tgagagatcc tgtctcaaaa 1800
 agcagggtga gaagtgattg aggaagacac ccagtggtta acctctgacc tccatattgtg 1860

catgcatgga cacgcatgga tacacatata cacacacaca cacacacaca cacacacaca 1920
cacacacaca cacacacaaa accagaaaga atgaacgccc ccctcccagc ttgtttacag 1980
tagatacaga gactcgtaa aacatggggt gtaaactgaa tgctgagagt aacttagatg 2040
agtaattaag gaaggaagag gaaagaaacc aggaaaccga gagcaagtga ctggaagatc 2100
gttaggcaat ctccacaccc tgctcgttga agttggaatg ctttcttctt ctgcctcttg 2160
aagttcttta gaagtgttag gatttcacaa ttagtctgtg gtggtttcaa tatgcttcac 2220
ccgtggtaag tggcactatt aggaaacgtg tccttggtga aggaaggggtg tctactgcata 2280
ggcgggcttt gaggtgtctt ccagtgtca agctcctccc agtgcaagag aggcagacac 2340
ctgttgctg cagaagacag tctctgtg cctttgaatc aagatgtaga actcaagccc 2400
catgtctgcc tgaacctctg aaactgtaag ccagcccaa ttaaagtgtt tctttcacia 2460
gagttgcctt ggtcatggtg tctgttcaca gcaataaaac cctaactaag acagtcttaa 2520
atcaatgaaa agacctttaa ttattcattg acaaacacc attttcttgt atcaagttgg 2580
cagtactag taagcaacta tagttctgca ccaggacct ttttgagaa atataccgat 2640
ccaagcatgt tggcctctag attccaaagc caagacacct gccacacct tccatgcctt 2700
gggttcctgg caggcatct ggcttcggg atgtgtattc caggcaccca ctggaatgca 2760
tggaacaat taaaatagca tcatagaaga cattgcaatc ctaggagaa actataccaa 2820
aactcagaac tatacctggt taagtgtaga aaagacgaaa ggaataaaac caggaatatt 2880
ttaaataatt tttattgagc tcatgtgcat gggatatttg cctgaaagta tgtctgtgta 2940
ccacatgcat ggctggctcc tgcagaggcc aaaagagagc atcagatctc cttagagctgg 3000
agtttcagaa gtttgtagc taccacatgg gtgctgaaa caaaaccag gacatctgga 3060
agagcagcca gtgttcttaa ctactgagc atcactcagg tcccaccatg aatgtttttc 3120
tttattcttc tctatatttt ctaatgtttt tattggaaat atacaacttt tgccacacat 3180
aacaatgac caaagaaatg aggtgagagg ggcagctgtt caaatgctgc ctgggaaggc 3240
ttggccagcc ctggcttggc tgccctggc tcagctggcc ctgacttggc tgtcccgggtg 3300
ccagctgtca tctactgctt cataataagc tgcactttgg gctgaagggg tggtcagcc 3360
tttaaaggct aggtcataa ccaaagtaag ttgcatttta tttgactag gttgaagggg 3420
gatctgaaac ttgctgtcaa tgttataaaa cattttatct tcaaatttg tataggggtc 3480
atagaccaaa ggttctataa acccagaac agcaccactc ctagaaata agcaccata 3540
caagagccta tgggacactt tatagccaaa caaaaagcta tgttgaaac ttcctttaca 3600
aggcctgag tccattcat aagggaagga gcccacttc gtaataacac cccactgggtg 3660
acatttgaag gggacacatt caaactgtaa caccatctta tatcatttgc acattaggggt 3720
caaactgtgc cacgttgtca tttctaagaa gacagaagtt gtcaagcctg tgctttgagc 3780

0303.ST25

09767088.012201

cacaagtgtg acaacctact ttcaggcaag tcgctacttc cctaagactc taccccaata 3840
 ggcttggggt ctggaatgtg tttaacacag atgcaggctt ctgccttagt gcaggcttga 3900
 gttctcatgt ccctctctct ttagctttcc gtctcaaggc gcctctcctt agcagaaaaa 3960
 atcagaggca taaagcatac atcaggggga agccagagtt ttcagaggga gttttgtgat 4020
 ggctttttca gagcattctt gtcaagacta gtttgcctcg ttctctttat taaatgaaag 4080
 aaaaataatg cagtgttgca aattagcttt ggtaatggct ccaaccattg tcagggttcac 4140
 agtctcattc cgccattcaa aacaacaaac ccaccacact ctctatgcag tgccgtaact 4200
 cagaacagcc accaaacagc agaaagaggc tccccgactc ctctcagcct tgccataaac 4260
 tcgcccggcca catgcttatt ttaaattatt taaattatgt cgtttctccc aacaatgacc 4320
 tccaagtgc ttggttgaca ggcttatacc attaagccga ggcttgcata gcaacgataa 4380
 ccaggtaggc tattattata accaggtagc tgccgagcta ctggtcgggc cccttttgtc 4440
 tctagaacc tctcaacccc cacccaaaaa agcttttatt gccacttcct agtgggtaga 4500
 gagcagtcag ccaatagata tttgattctt tgaggaaaaa gctgagtttt gatgtctttt 4560
 aatcaagcct ttcagagtc ctctgtggg gaggccaggt ggaagcgggg tggaagctg 4620
 gtcccttacc taagctaata tagacaccct cccactctc ccctgcctc ttgacagatg 4680
 cagtcacct gatcacaatg agtattctct gaggcaggaa ggcaaggctc tggaagatgg 4740
 tcaatgcctt cattaagaac ccagagtaaa ggtcaagcag acaccagcac cgctgaaatc 4800
 taatttcact gtaattgaat catctcagcc aaaggctgta ttttccagcc ctctcgtggc 4860
 ctcttcccca acaactgtca acaactgtgt gagcctaccc atgtatgcgc gctcacacac 4920
 acacacacac acacacacac acacacacac aggggtggggg gacacaatga ttacacaaga 4980
 gtacttaata aacaactata attctcctgg ctccgtagt tccttaccac cctctcctcc 5040
 tggatccgga tcctaatact ggatacaaat atttaacca aaccaatct tgtgtctgtt 5100
 aatgatcttc agtgtctcgc cctcagcaag aggacaggat attatgtttt ccctgtgatt 5160
 tatgacctct tctgtctcag tatcggcagc aatttattta catggctttg gagtgtgtta 5220
 tatgtgtagt atggacatga ggggtcatgt caacctatgt gtggaggcca gaggtcaatg 5280
 tcatgtcttc cccaatcact gccagtggt ccctggattc caaactcagg tcctcacgct 5340
 tgggaactga gccagtgcc cagctcctaa ccctcccctg ttttaaaaag gtctcattat 5400
 gttgcccagg tcagccttga acttgagagt ctctgactg caggctttca cctgtccaag 5460
 tcagcaggca tcttgaacaa gaacatcatt tcctttaagc tgtttcaggc tgtgtttggt 5520
 gggagctgtt aaatgcagtg catTTTTTcc tttggacaca ataaaagaaa aaagtgatta 5580
 aatgagttgg gtgtgggtg gcgagtctac aatcctagaa ctcaggagat tgaggagaa 5640
 gcattgctct gagtttgagg tcagcttaaa ttacttagta ggaacaccag gccaaattgg 5700
 gctatgggat tgtctccaaa gataaagaaa aaagggagg agagaaaaga aaaagaaagg 5760

aaagaagggg aaaagaagga atcagcagag aataaataag tcaacatgca atggccaata 5820
 tactttctag gcctctaatt cttttatagt ttgtgggaaa atgtcgaaaa tcttcgttac 5880
 caatttcttg ttaccāaagt tcaacgatgg cttcctcgct cegttaggta acctttcatt 5940
 ttctcaacta cccattatgt aacgggagca ttgggtactg gatcagtctt ccattaaaga 6000
 tgatttttat agttgctgag cgtcgtcagg gagtgtgac actgggggcg gtttaaacag 6060
 atacaagcat ttaagccagt ccggagcggg gactcatccc ccccccaccc ccccccccg 6120
 cgagagacgc ggcgcggcca ttggtgagca tcacgccccg cccctcgccc cgcctagttc 6180
 ccgcctgccc cgcccccttc cactcccggc tcccccgct tgcggatca gcagaccgat 6240
 tctgggcgct gcgtcgcatc ggtggcaggg aagcgggctg ctgaagccag gccttgcca 6300
 gcactcagcc ttccgtcgtc aagctcggct cactgcgcct ctcggggcct tgaggccacg 6360
 gggactagga ctgggactgg gactggggct gagtctggct gggagggtgac tgtacacccc 6420
 ctgctgcgcg actcctggag gaaccgaatc ccagggcagc caggccggga gccagccttt 6480
 ccttcccgag ccagattcac agctcagcat cgctggggat,gggggtggca tcttttgact 6540
 gtccttggtt gttttcttct ctctttgtag tagctacagc gaacataatt ttacctcgtt 6600
 attccaccac agtcattact cccttgcaaca gtttcattct caacgtcgcc gtgcgccttc 6660
 actgcctgt ctaggcgttt tcatgattgt ctattttctt gtactttgaa taccgtggtt 6720
 taatagcagt tgcgggtgcg cagaattctc catttcctta agagaaactc ctgggagaat 6780
 gggactaaag acgtgcaaatt ttaattatat cgcaaacagg aatcaaaatt ttgcattaaa 6840
 atgcaaaca tcttgaaaaa ttaactatc aatgaagaaa aggaactact ttacctacac 6900
 acacatccga gagcttcgag gaggcgaagg aaatagaaag ctaagggatg atttgggttg 6960
 tatttgaatc tgacacaagc tttccatatt atttatagca gggactaaac gatgagtcac 7020
 tttctgaata agatgcaaatt taaagcaagt ttgtttgttg tctttacatc tattaatag 7080
 acagagacaa tggcaacagc aaccctaacc tagagggtgc ctgaaagtgt caggtttggg 7140
 aacaagtggc cctgcttaag ggctagaaag attgctttac aaccaacaat catgacttga 7200
 cattgcctgg ggttcctttt gtctattcct tttttaaaag actagtgttt attttatgtg 7260
 catgagtgtt ttgcatccac attgcctgt atacacacct ggttctgtgg aggtcaggag 7320
 aggggtgctg atgccctggc actagagcct tggatggtta tgtgagcccc tgccacaggg 7380
 gagtcagaa ccaaatccag gtctctgga agagcaacca gagctcttaa aacttctaag 7440
 tatccctcca tcccctttcc atcatatttg gaaaggagaa aactgctacc catgcctggc 7500
 atttatttca gagattaact gtctgtgtaa aacttgacat tgaaagtgca ctattctgtt 7560
 tcccatcat acttagttga gactactgta agtcagttag ggctttttt gtttggttcc 7620
 ttggttagtt tggagtgtgt ttgtgagctc attaacaggc tttcaatatg tagctggaat 7680

0303.ST25

ttgctgtgta gaccagacag gcctcaaatt tgtggcaatc ctccctgcat cttcccagaa 7740
 tgccctggta caggcataaa ccaccgtgcc cagcagtaaa acaatctggt gaggtattat 7800
 tagtcgtgtg ctgtgaccca gaaacccccac tcctggcaat ttactgggaa ggaacaaaca 7860
 aagggctagg ggagccatat ggctgcagt tagagaaaat tagatccaac tgaaaaaatca 7920
 acctaaaggt gtaaaagcca agcagttaag aaactgacaa gctcatgatg gaagccgagg 7980
 ccatcgtgaa cactcttcat tttaggcccc acgtatcact ggggacaact gagagtcaaa 8040
 gtacaggtaa ggagaccaag gcttttcagg actcaggctg tctcagtga aagcccagaa 8100
 gagcagtaat tgaaagagct cagacgatgt gtctgatctc ctctgtttgt ttgttgctgt 8160
 attatttcca ctaacttatt tgggagga aaacacagtt cacaggcttc ttttcttgaa 8220
 atactgggga ttgctgggat cgaaccaggt gataggtttt tagtttctaa aataacatag 8280
 atcatgcctt gtttgctttt tggaatatgt ttgcgctgcc cttattttca tgttcaaata 8340
 ctgctccatt ttgcgtgact ctttagtatt ggtttgatga tttgcatatt agattagatt 8400
 gtatttcagt tctcagactt atttatcaat tctagttttc tctttttgtt gttttaag 8460
 actcctgagt atatttcaga actgaacat ttcaaccgag ctgaagcatt ctgccttct 8520
 agtggtagct cgactatcag gtgaactttg aaccaggatg gctgagcccc gccaggagtt 8580
 cgaagtgatg gaagatcacg ctgggacgta cgggttggg gacaggaaa atcagggggg 8640
 ctacaccatg caccaagacc aagagggtga cacggacgct ggctgaaag ctgaagaagc 8700
 aggcattgga gacaccccc gcctggaaga cgaagctgct ggtcacgtga cccaagctcg 8760
 catggtcagt aaaagcaaag acgggactgg aagcgatgac aaaaaagcca agggggctga 8820
 tggtaaaacg aagatcgcca caccgcgggg agcagcccc ctaggccaga agggccaggc 8880
 caacgccacc aggattccag caaaaacccc gcccgctcca aagacaccac ccagctctgg 8940
 tgaacctcca aaatcagggg atcgagcgg ctacagcagc cccggctccc caggcactcc 9000
 cggcagccgc tcccgcacc cgctcccttc aacccccacc acccgggagc ccaagaaggt 9060
 ggcagtggtc cgtactccac ccaagtgcgc gtcttcggc aagagccgc tgcagacagc 9120
 ccccggtccc atgccagacc tgaagaatgt caagtccaag atcggtcca ctgagaacct 9180
 gaagcaccag ccgggaggcg ggaaggtgca gataattaat aagaagctgg atcttagcaa 9240
 cgtccagtcc aagtgtggct caaaggataa tatcaaacac gtcccgagg gcggcagtgt 9300
 gcaaatagtc taaaaccag ttgacctgag caaggtgacc tccaagtgtg gctcattagg 9360
 caacatccat cataaaccag gaggtggcca ggtggaagta aaatctgaga agcttgactt 9420
 caaggacaga gtccagtga agattgggtc cctggacaat atcaccacg tccctggcgg 9480
 aggaataaaa aagattgaaa cccacaagct gaccttcgc gagaacgcca aagccaagac 9540
 agaccacggg gcggagatcg tgtacaagtc gccagtgtg tctggggaca cgtctccacg 9600
 gcatctcagc aatgtctcct ccaccggcag catcgacatg gtagactcgc cccagctcgc 9660

0303.ST25

cacgctagct gacgaggtgt ctgcctccct ggccaagcag ggtttgtgat caggcccctg 9720
 gggcgggtcaa taattgtgga gaggagagaa tgagagagtg tggaaaaaaa aagaataatg 9780
 acccggtccc cgcctctgc cccagctgc tctcgcagt tcgggaattc ggatccagat 9840
 cttattaaag cagaacttgt ttattgcagc ttataatggt tacaataaaa gcaatagcat 9900
 cacaaatttc acaaataaag catttttttc actgcattct agttgtggtt tgtccaaact 9960
 catcaatgta tcttatcatg tctggtcgac 9990

<210> 3
 <211> 25
 <212> DNA
 <213> Artificial

<220>
 <223> Primer

<400> 3
 agtaattgaa agagctcaga cgatg 25

<210> 4
 <211> 23
 <212> DNA
 <213> Artificial

<220>
 <223> Primer

<400> 4
 tgtcacccctc ttggtcttgg tgc 23

<210> 5
 <211> 22
 <212> DNA
 <213> Artificial

<220>
 <223> Primer

<400> 5
 gtactccacc caagtcgccg tc 22

<210> 6
 <211> 23
 <212> DNA
 <213> Artificial

<220>
 <223> Primer

<400> 6
 gcagcagcat cgaagcttct cag 23

<210> 7
 <211> 48
 <212> DNA

<213> Artificial

<220>

<223> Missense

<400> 7

gcagcagcat cgaagcttct cagatttttac ttccatctgg ccacctcc

48

<210> 8

<211> 20

<212> DNA

<213> Artificial

<220>

<223> Primer

<400> 8

ccgccaagag ccgcctgcag

20

<210> 9

<211> 61

<212> DNA

<213> Artificial

<220>

<223> Primer

<400> 9

gcagcagcat cgaagcttct cagatttttac ttccacctgg ccacctccta gtttatgatg

60

g

61

<210> 10

<211> 1152

<212> DNA

<213> Homo sapiens

<400> 10

atggctgagc cccgccagga gttcgaagtg atggaagatc acgctgggac gtacggggtg

60

ggggacagga aagatcaggg gggctacacc atgcaccaag accaagaggg tgacacggac

120

gctggcctga aagctgaaga agcaggcatt ggagacaccc ccagcctgga agacgaagct

180

gctggtcagc tgacccaagc tcgcatggtc agtaaaagca aagacgggac tggaagcgat

240

gacaaaaaag ccaagggggc tgatggtaaa acgaagatcg ccacaccgag gggagcagcc

300

cctccaggcc agaagggcca ggccaacgcc accaggattc cagcaaaaac cccgcccgt

360

ccaaagacac caccagctc tggatgaacct ccaaaatcag gggatcgag cggtacagc

420

agccccggt cccaggcac tcccggcagc cgtccccga cccgctccct tccaaccca

480

cccacccggg agccaagaa ggtggcagtg gtccgtactc caccgaagtc gccgtcttcc

540

gccaagagcc gctgcagac agccccgtg cccatgccag acctgaagaa tgtcaagtcc

600

aagatcggt cactgagaa cctgaagcac cagccgggag gcgggaaggt gcagataatt

660

aataagaagc tggatcttag caacgtccag tccaagtgtg gctcaaagga taatatcaaa

720

0303.ST25

cacgtcccg gaggcgagcag tgtgcaaata gtctacaaac cagttgacct gagcaagggtg 780
 acctccaagt gtggctcatt aggcaacatc catcataaac caggaggtgg ccagatggaa 840
 gtaaaatctg agaagcttga cttcaaggac agagtccagt cgaagattgg gtccctggac 900
 aatatcacc acgtccctgg cggaggaaat aaaaagattg aaaccacaa gctgaccttc 960
 cgcgagaacg ccaaagccaa gacagaccac gggcgaggaga tcgtgtacaa gtcgccagtg 1020
 gtgtctgggg acacgtctcc acggcatctc agcaatgtct cctccaccgg cagcatcgac 1080
 atggtagact cgcccagct cgccacgcta gctgacgagg tgtctgcctc cctggccaag 1140
 cagggtttgt ga 1152

<210> 11
 <211> 1152
 <212> DNA
 <213> Homo sapiens

<400> 11
 atggctgagc cccgccagga gttcgaagtg atggaagatc acgtgggac gtacgggttg 60
 ggggacagga aagatcaggg gggctacacc atgcaccaag accaagaggg tgacacggac 120
 gctggcctga aagctgaaga agcaggcatt ggagacaccc ccagcctgga agacgaagct 180
 gctggtcacg tgaccaagc tcgcatggtc agtaaaagca aagacgggac tggaagcgat 240
 gacaaaaaag ccaagggggc tgatggtaaa acgaagatcg ccacaccgag gggagcagcc 300
 cctccaggcc agaagggcca ggccaacgcc accaggattc cagcaaaaac cccgcccgt 360
 ccaaagacac caccagctc tggatgaacct ccaaaatcag gggatcgag cggtacagc 420
 agccccggct cccaggcac tcccggcagc cgctcccgca cccgctcct tccaaccca 480
 cccaccggg agccaagaa ggtggcagt gtccgtact caccaagtc gccgtcttc 540
 gccaaagagc gcctgcagac agccccgtg cccatgccag acctgaagaa tgtcaagtcc 600
 aagatcggt ccaactgagaa cctgaagcac cagccgggag gcgggaaggt gcagataatt 660
 aataagaagc tggatcttag caacgtccag tccaagtgtg gtcxaaagga taatatcaaa 720
 cacgtcccg gaggcgagcag tgtgcaaata gtctacaaac cagttgacct gagcaagggtg 780
 acctccaagt gtggctcatt aggcaacatc catcataaac taggaggtgg ccaggtggaa 840
 gtaaaatctg agaagcttga cttcaaggac agagtccagt cgaagattgg gtccctggac 900
 aatatcacc acgtccctgg cggaggaaat aaaaagattg aaaccacaa gctgaccttc 960
 cgcgagaacg ccaaagccaa gacagaccac gggcgaggaga tcgtgtacaa gtcgccagtg 1020
 gtgtctgggg acacgtctcc acggcatctc agcaatgtct cctccaccgg cagcatcgac 1080
 atggtagact cgcccagct cgccacgcta gctgacgagg tgtctgcctc cctggccaag 1140
 cagggtttgt ga 1152

<210> 12

<211> 19
 <212> DNA
 <213> Artificial

<220>
 <223> Primer

<400> 12
 gcattggaga cccccccag

19

<210> 13
 <211> 21
 <212> DNA
 <213> Artificial

<220>
 <223> Primer

<400> 13
 gcttttactg accatgag c

21

<210> 14
 <211> 25
 <212> DNA
 <213> Artificial

<220>
 <223> Primer

<400> 14
 ctggaagacg aagctgctgg tcacg

25

<210> 15
 <211> 9990
 <212> DNA
 <213> Artificial

<220>
 <223> PrP/tau transgene construct

<400> 15
 ggcgccgcg acggatccaa aggcagcaaa aaggcagaga gggtgatact gggcctggct 60
 taagcatttg aaacttcaaa gtcaccccc aattacacac ttcttccaac aagtccacac 120
 ctctaatta gtgccactct ctgtgggcct acggagagta ttttcattct aactaccaca 180
 gttgctgagg aatttaatta aaactacaac cttatcccaa cctagatctt tcagcctttc 240
 tgtactacca gagaggggtc atacagcatt gttgtgactc ccattataac ttaaaggga 300
 gtcacacaa agtcagagc cctccatacc ctgcaaatga agaagtacgt tctcaaatcc 360
 cttggagcag ggccccactt tggcggcaca aactttaatt tctagacgga acggcatctc 420
 tacagaaaga aaagccatgg tatctgcatg ataagtctga aaaggacctg ggcaaatctg 480
 cagctgacaa ttccagccat tgctgccact gcgagaaaac cctgctgatg gcagcattgt 540
 cagcatcatc tcctccagga acaccggcca tcgagccacg aggacaattg ctgctgctgg 600
 agtcaattca tctgccagcc acatcatact ctgggaccgt cactaaccag atccaagcag 660

0303.ST25

ccttgaggaa gcatgtcttc tgggtggtgac tgatcccaag ggctgacaac aaggctcctca 720
 cagaggcatc ttatgtcaac ctatctacca tgcacggtat aagacacatt ctctctgtg 780
 ctgtgtggac actgccatca cacgcaacag aaaggaaact cactcactgt gtctgatgtg 840
 gtgtgtgctt ttaggggagt tctgggcatg tatggcacca tcgcccataa ggactcctgt 900
 ggggtcatgc cactctact cctctagaga ccatgaagag atggagaggg aagagcaagc 960
 acagatgaca ggctagaact aaagaggagt gtcagggtgag cggacctgaa ctcacggctg 1020
 ctcagcctga agtgggtgtg ccatctgcat ctggtatctg gtctgaagggt gcgtggatac 1080
 cctctgtgcc cgtccagaag tttcctaact aagacagaaa tgcctgtcca gtcattggaag 1140
 aatgattggc agttccact tctcagacca ctgaatgggt cagaacaact actgggtgac 1200
 cctaaggat tcttcagcag atatgtgtga aaaatggaaa gaagatgggt agaaataaac 1260
 ggttttagag gaaaaaaact ctcaaaaaga tattataaaa agaaaagagc tttattattg 1320
 agcaagcatt caaccagaat gcacaccaca ggcagtctgc taaggagtg tgcagacagg 1380
 aggagtgtcg ccctttatgt gagccagtag ataaggatgc tgtgcgtgtt tttagtaact 1440
 aggtcttcac ttgacagcac catttatcac atggtttaac cttaaattcat ctggcgaatg 1500
 aggctgtcac gtacttctg attagcttta tctgaaatga gacaagcttc acatgttcac 1560
 ggcaggaggt aatcctgctg cttagagaac aggttccatc caagccaggc tccttctccc 1620
 accaaccacg gtggttgaag agctatctct ccctgggtgtg tgtgtttcag agatggctcc 1680
 cagggttttg gtttggtttg aattgggttt tggttttctt actctagccc agactagctt 1740
 ggaattctct ggaagctgc aacggggagc tcagggttcag tgagagatcc tgtctcaaaa 1800
 agcagggtga gaagtgttg aggaagacac ccagtggtta acctctgacc tccatatgtg 1860
 catgcatgga cacgcatgga tacacatata cacacacaca cacacacaca cacacacaca 1920
 cacacacaca cacacacaaa accagaaaga atgaacgccc ccctcccagc ttgtttacag 1980
 tagatacaga gactcgtaa aacatggggt gtaaaactgaa tgctgagagt aacttagatg 2040
 agtaattaag gaaggaagag gaaagaaacc aggaaccga gagcaagtga ctggaagatc 2100
 gttaggcaat ctccacaccc tgctcgttga agttggaatg ctttcttctt ctgcctcttg 2160
 aagttcttta gaagtgttag gatttcacaa ttagtctgtg gtgggttcaa tatgcttcac 2220
 ccgtggtaag tggcactatt aggaacgtg tccttggtga aggaagggtg tcaactgcata 2280
 ggcggtctt gaggtgtctt ccagtgtcga agctcctccc agtgcaagag aggcagacac 2340
 ctgttgctg cagaagacag tctcctgctg cctttgaatc aagatgtaga actcaagccc 2400
 catgtctgcc tgaacctctg aaactgtaag ccagcccaa ttaaattgtt tctttcacia 2460
 gagttgctt ggtcatggtg tctgttcaca gcaataaaac cctaactaag acagtcttaa 2520
 atcaatgaaa agacctttaa ttattcattg acaaacacc attttcttgt atcaagttgg 2580

0303.ST25

cagtgactag taagcaacta tagttctgca ccagggacct ttttgagaa atataccgat 2640
 ccaagcatgt tggcatctag attccaaagc caagacacct gccacacct tccatgcctt 2700
 gggttcctgg cagggcatct ggcttcgggg atgtgtattc caggcacca ctggaatgca 2760
 tggaacaat taaaatagca tcatagaaga cattgcaatc ctaggagaa actataccaa 2820
 aactcagaac tatacctggg taagtgtaga aaagacgaaa ggaataaaac caggaatatt 2880
 ttaaaatatt tttattgagc tcatgtgcat gggatatttg cctgaaagta tgtctgtgta 2940
 ccacatgcat ggctggctcc tgcagaggcc aaaagagagc atcagatctc ctagagctgg 3000
 agtttcagaa gtttgtgagc taccacatgg gtgctggaaa caaaaccag gacatctgga 3060
 agagcagcca gtgttcttaa ctactgagcc atcactcagg tcccacatg aatgtttttc 3120
 tttattcttc tctatatttt ctaatgtttt tattggaaat atacaacttt tgccacacat 3180
 aacaaatgac caaagaaatg aggtgagagg ggagctgtt caaatgctgc ctgggaaggc 3240
 ttggccagcc ctggcttggc tgccctggc tcagctggcc ctgacttggc tgtcccggtg 3300
 ccagctgtca tctactgctt cataataagc tgcactttgg gctgaagggg tggctcagcc 3360
 tttaaaggct aggtcataa ccaaagtaag ttgcatttta tttgactag gttgaagggg 3420
 gatctgaaac ttgctgtcaa tgttataaaa cattttatct tcaaatttgg tataggggtc 3480
 atagaccaa ggttctataa accccagaac agcaccactc cctagaaata agcaccata 3540
 caagagccta tgggacactt tatagccaaa caaaaagcta tgtttgaaac ttcctttaca 3600
 agggcctgag tcccattcat aagggaagga gcccacttc gtaataacac cccactgggtg 3660
 acatttgaag gggacacatt caaactgtaa caccatctta tatcatttgc acattaggggt 3720
 caaactgtgc cacgttgtca tttctaagaa gacagaagtt gtcaagcctg tgctttgagc 3780
 cacaagtgtg acaacctact ttcaggcaag tcgctacttc cctaagactc taccccaata 3840
 ggcctgggggt ctggaatgtg ttaacacag atgcaggctt ctgccttagt gcaggcttga 3900
 gttctcatgt cctctctct ttagctttcc gtctcaaggc gcctctcctt agcagaaaaa 3960
 atcagaggca taaagcatac atcaggggga agccagagtt ttcagaggga gttttgtgat 4020
 ggccttttca gagcattctt gtcaagacta gtttgccctg ttctctttat taaatgaaag 4080
 aaaaataatg cagtgttgca aattagcttt ggtaatggct ccaaccattg tcaggttcac 4140
 agtctcattc cgccattcaa aacaacaaac ccaccacact ctctatgcag tgccgtaact 4200
 cagaacagcc accaaacagc agaaagaggc tccccgactc ctctcagcct tgccataaac 4260
 tcgccggcca catgcttatt ttaaattatt taaattatgt cgtttctccc aacaatgacc 4320
 tccaagtgc ttggttgaca ggcttatacc attaaagccga ggcttgcata gcaacgataa 4380
 ccaggtaggc tattattata accaggtagc tgccgagcta ctggctgggc cccttttgc 4440
 tctagaaacc tctcaacccc caccacaaaa agcttttatt gccacttcct agtgggtaga 4500
 gagcagtcag ccaatagata ttgattctt tgaggaaaaa gctgagtttt gatgtctttt 4560

aatcaagcct ttcagagtcc ctctgtgggg gaggccaggt ggaagcgggg tgggaagctg 4620
gtcccttacc taagctaata tagacaccct cccactcctc ccctgccctc ttgacagatg 4680
cagtcacctc gatcacaatg agtattctct gaggcaggaa ggcaaggctc tggaagatgg 4740
tcaatgcctt cattaagaac ccagagtaaa ggtcaagcag acaccagcac cgctgaaatc 4800
taatttcact gtaattgaat catctcagcc aaaggctgta ttttccagcc ctctcgtggc 4860
ctcttcccca acaactgtca acaactgtgt gagcctaccc atgtatgcgc gctcacacac 4920
acacacacac acacacacac acacacacac aggggtggggg gacacaatga ttacacaaga 4980
gtacttaata aacaactata attctcctgg ctcgatagat tccttaccac cctctcctcc 5040
tggatccgga tcctaatact ggatacaaat atttaatcca aaccaatct tgtgtctggt 5100
aatgatcttc agtgtctcgc cctcagcaag aggacaggat attatgtttt ccctgtgatt 5160
tatgacctct tctgtctcag tatcggcagc aatttattta catggctttg gagtgtgtta 5220
tatgtgtagt atggacatga ggggtcatgt caacctatgt gtggaggcca gaggtcaatg 5280
tcatgtcttc cccaatcact gccagtggt ccctggattc caaactcagg tcctcacgct 5340
tgggaactga gccagtgcc cagctcctaa ccctccctg ttttaaaaag gtctcattat 5400
gttggccagg tcagccttga acttgagagt ctctgactg caggctttca cctgtccaag 5460
tcagcaggca tcttgaacaa gaacatcatt tcctttaagc tgtttcaggc tgtgtttggt 5520
gggagctggt aaatgcagtg cttttttcc tttggacaca ataaaagaaa aaagtgatta 5580
taatgagttg gtgtggtggt gcgagtctac aatcctagaa ctcaggagat tgaggagaaa 5640
gcattgctct gagtttgagg tcagcttaaa ttacttagta ggaacaccag gccaaattgg 5700
gctatgggat tgtctccaaa gataaagaaa aaaggaagg agagaaaaga aaaagaaagg 5760
aaagaagggg aaaagaagga atcagcagag aataaataag tcaacatgca atggccaata 5820
tactttctag gcctctaatt cttttatagt ttgtgggaaa atgtcgaaaa tcttcgttac 5880
caatttcttg ttaccaaaagt tcaacgatgg ctctcctcgt ccgttaggta acctttcatt 5940
ttctcaacta cccattatgt aacgggagca ttgggtactg gatcagtctt ccattaaaga 6000
tgatttttat agttgctgag cgtcgtcagg gagtgctgac actgggggag gtttaaacag 6060
atacaagcat ttaagccagt ccggagcggg gactcatccc ccccccaccc cccccccg 6120
cgagagacgc ggcgcggcca ttggtgagca tcacgccccg cccctcgccc cgctagtctc 6180
ccgctgccc cgccctttc cactcccgcc tcccccggt tgcgggatca gcagaccgat 6240
tctgggcgct gcgtcgcatc ggtggcaggt aagcgggctg ctgaagccag gccttggcga 6300
gcactcagcc ttccgtcgtc aagctcggct cactgcgctc ctggggcct tgaggccacg 6360
gggactagga ctgggactgg gactggggct gagtctggct gggagggtgac tgtacacccc 6420
ctgctgcgcg actcctggag gaaccgaatc ccagggcagc caggccggga gccagccttt 6480

0303.ST25

ccttcccagag ccagattcac agctcagcat cgctggggat gggggtggca tcttttgact 6540
 gtccttggct gttttcttct ctctttgtag tagctacagc gaacataatt ttacctcggt 6600
 attccaccac agtcattact cccttgaca gtttcattct caacgtcgcc gtgcgccttc 6660
 actgcctgt ctaggcgttt tcatgattgt ctattttctt gtactttgaa taccgtggtt 6720
 taatagcagt tgcgggtgcg cagaattctc catttcctta agagaaactc ctgggagaat 6780
 gggactaaag acgtgcaaatt ttaattatat cgcaaacagg aatcaaaatt ttgcattaaa 6840
 atgccaaca tcttgaaaaa ttaactattc aatgaagaaa aggaactact ttacctacac 6900
 acacatccga gagcttcgag gaggcgaagg aaatagaaa ctaagggatg atttgggttg 6960
 tatttgaatc tgacacaagc tttccatatt atttatagca gggactaaac gatgagtcac 7020
 tttctgaata agatgcaaatt taaagcaagt ttgtttgttg tctttacatc tattaaatag 7080
 acagagacaa tggcaacagc aaccctaacc tagagggtgc ctgaaagtgt cagggttggg 7140
 aacaagtggc cctgcttaag ggctagaaa attgctttac aaccaacaat catgacttga 7200
 cattgcctgg ggttcctttt gtctattcct tttttaaaag actagtgttt attttatgtg 7260
 catgagtgtt ttgcatccac attcgctgt atacacacct gggtctgtgg aggtcaggag 7320
 aggggtgctg atgccctggc actagagcct tggatggtta tgtgagcccc tgccacaggg 7380
 gagctcagaa ccaaattccag gtccctgga agagcaacca gagctcttaa aacttctaag 7440
 tatccctcca tcccctttcc atcatatttg gaaaggagaa aactgctacc catgcctggc 7500
 atttatttca gagattaact gtctgtgtaa aacttgacat tgaaagtgca ctattctgtt 7560
 tcccattcat acttagttga gactactgta agtcagttag ggcttttttt gtttggttcc 7620
 ttggttagtt tggagtgtgt ttgtgagctc attaacaggc tttcaatatg tagctggaat 7680
 ttgtgtgtga gaccagacag gcctcaaatt tgtggcaatc ctccctgcat cttcccagaa 7740
 tgccctggta caggcataaa ccacgtgcc cagcagtaaa acaatctggt gaggtattat 7800
 tagtcgtgtg ctgtgacca gaaacccac tcctggcaat ttactgggaa ggaacaaaca 7860
 aagggctagg ggagccatat ggctgcagt tagagaaaat tagatccaac tgaaaaatca 7920
 acctaaagggt gtaaaaagcca agcagttaag aaactgacaa gctcatgatg gaagccgagg 7980
 ccacgtgaa cactcttcat tttaggcccc acgtatcact ggggacaact gagagtcaaa 8040
 gtacaggtaa ggagaccaag gcttttcagg actcaggctg tctcagtga aagcccagaa 8100
 gagcagtaat tgaaagagct cagacgatgt gtctgatctc ctctgtttgt ttgttgctgt 8160
 attatttcca ctaacttatt tgggaggaaa aaaaacagtt cacaggcttc ttttcttgaa 8220
 atactgggga ttgctgggat cgaacccagg gataggtttt tagtttctaa aataacatag 8280
 atcatgcctt gtttgctttt tggaatatgt ttgcgtgcc cttattttca tgttcaaata 8340
 ctgctccatt ttgcgtgact ctttagtatt ggtttgatga tttgcatatt agattagatt 8400
 gtatttcagt tctcagactt atttatcaat tctagttttc tctttttgtt gttttaaagg 8460

0303.ST25

actcctgagt atatttcaga actgaaccat ttcaaccgag ctgaagcatt ctgccttcct 8520
 agtgggtacct cgactatcag gtgaactttg aaccaggatg gctgagcccc gccaggagtt 8580
 cgaagtgatg gaagatcacg ctgggacgta cgggttggg gacaggaaa atcagggggg 8640
 ctacaccatg caccaagacc aagaggggtga cacggacgct ggcctgaaag ctgaagaagc 8700
 aggcatgga gacaccccca gcctggaaga cgaagctgct ggtcacgtga cccaagctcg 8760
 catggctcagt aaaagcaaag acgggactgg aagcgatgac aaaaaagcca agggggctga 8820
 tggtaaaacg aagatcgcca caccgcgggg agcagcccct ccaggccaga agggccaggc 8880
 caacgccacc aggattccag caaaaacccc gcccgctcca aagacaccac ccagctctgg 8940
 tgaacctcca aaatcagggg atcgcagcgg ctacagcagc cccggctccc caggcactcc 9000
 cggcagccgc tcccgcaccc cgtcccttcc aacccccacc acccgggagc ccaagaaggt 9060
 ggcagtggtc cgtactccac ccaagtcgcc gtcttcgcc aagagccgcc tgcagacagc 9120
 ccccgctgcc atgccagacc tgaagaatgt caagtccaag atcggtcca ctgagaacct 9180
 gaagcaccag ccgggaggcg ggaagtgca gataattaat aagaagctgg atcttagcaa 9240
 cgtccagtc aagtgtggct caaaggataa tatcaaacac gtcccgggag gcggcagtg 9300
 gcaaatagtc tacaaccag ttgacctgag caaggtgacc tccaagtgtg gctcattagg 9360
 caacatccat cataaaccag gaggtggcca ggtggaagta aaatctgaga agcttgactt 9420
 caaggacaga gtccagtcga agattgggtc cctggacaat atcaccacg tccctggcgg 9480
 aggaaataaa aagattgaaa ccacaagct gaccttcgc gagaacgcca aagccaagac 9540
 agaccacggg gcggagatcg tgtacaagtc gccagtggtg tctggggaca cgtctccacg 9600
 gcatctcagc aatgtctcct ccaccggcag catcgacatg gtagactcg cccagctcg 9660
 cacgctagct gacgaggtgt ctgcctccct ggccaagcag ggtttgtgat caggcccctg 9720
 gggcgggtcaa taattgtgga gaggagagaa tgagagagtg tggaaaaaaa aagaataatg 9780
 acccgcccc cgccctctgc cccagctgc tcctcgagc tgggaattc ggatccagat 9840
 cttattaaag cagaacttgt ttattgcagc ttataatggt taaaataaa gcaatagcat 9900
 cacaatttc aaaaataaag ctttttttc actgcattct agttgtggtt tgcctaaact 9960
 catcaatgta tcttatcatg tctggtcgac 9990